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FILE LAST UPDATED: 21 Jun 2007 (20070621/ED)

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=> s beta amino acid  
1460741 BETA  
1325 BETAS  
1460818 BETA  
(BETA OR BETAS)  
1123081 AMINO  
44 AMINOS  
1123099 AMINO  
(AMINO OR AMINOS)  
4390075 ACID  
1579075 ACIDS  
4889585 ACID  
(ACID OR ACIDS)  
L1 2949 BETA AMINO ACID  
(BETA(W)AMINO(W)ACID)

=> s alpha beta unsaturated carbonyl compound  
1693145 ALPHA  
2493 ALPHAS  
1693252 ALPHA  
(ALPHA OR ALPHAS)  
1460741 BETA  
1325 BETAS  
1460818 BETA  
(BETA OR BETAS)  
56956 UNSATURATED  
1 UNSATURATEDS  
56957 UNSATURATED  
(UNSATURATED OR UNSATURATEDS)  
228182 UNSATD  
13 UNSATDS  
228185 UNSATD  
(UNSATD OR UNSATDS)  
243085 UNSATURATED  
(UNSATURATED OR UNSATD)  
175092 CARBONYL

27670 CARBONYLS  
183368 CARBONYL  
(CARBONYL OR CARBONYLS)  
122915 COMPOUND  
872009 COMPOUNDS  
977161 COMPOUND  
(COMPOUND OR COMPOUNDS)  
1165677 COMPD  
1740256 COMPDS  
2490661 COMPD  
(COMPD OR COMPDS)  
2929224 COMPOUND  
(COMPOUND OR COMPD)  
L2 1924 ALPHA BETA UNSATURATED CARBONYL COMPOUND  
(ALPHA(W) BETA(W) UNSATURATED(W) CARBONYL(W) COMPOUND)

=> s L1 and L2  
L3 11 L1 AND L2

=> s Lithium amide  
325716 LITHIUM  
370 LITHIUMS  
325844 LITHIUM  
(LITHIUM OR LITHIUMS)  
130578 AMIDE  
82097 AMIDES  
178013 AMIDE  
(AMIDE OR AMIDES)  
L4 1488 LITHIUM AMIDE  
(LITHIUM(W) AMIDE)

=> s L3 and L4  
L5 1 L3 AND L4

=> d L5 bib abs

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1997:104679 CAPLUS  
DN 126:199800  
TI Asymmetric synthesis of  $\beta$  -amino acids  
via the Michael addition of chiral metal amides  
AU Davies, Stephen G.; Ichihara, Osamu  
CS Dyson Perrins Lab., Univ. Oxford, Oxford, UK  
SO Yuki Gosei Kagaku Kyokaishi (1997), 55(1), 42-50  
CODEN: YGKKA; ISSN: 0037-9980  
PB Yuki Gosei Kagaku Kyokai  
DT Journal; General Review  
LA Japanese  
AB A review with 32 refs. A Li amide conjugate addition approach to the synthesis of  $\beta$  -amino acid derivs. is described. Li amides derived from  $\alpha$ -methylbenzylamine undergo highly diastereoselective 1,4-conjugate addition to a variety of alpha., $\beta$  -unsatd. carbonyl compds. The benzyl substituents on the amino group can be readily removed by hydrogenolysis to afford a wide range of  $\beta$  -amino acid derivs. The enolate intermediate can be trapped by electrophiles such as alkyl halides and (camphorsulfonyl)oxaziridine to give  $\alpha$ -alkyl and  $\alpha$ -hydroxy- $\beta$  -amino acids in a highly stereocontrolled fashion. The synthetic utility of the methodol. is demonstrated by the syntheses of nos. of natural products and other important synthetic intermediates such as taxol C-13 side chain, cispentacin, and (+)-negamycin. The origin of the stereoselectivity is briefly discussed.

=> s chiral ligand  
 116143 CHIRAL  
 16 CHIRALS  
 116147 CHIRAL  
 (CHIRAL OR CHIRALS)  
 322807 LIGAND  
 219575 LIGANDS  
 439244 LIGAND  
 (LIGAND OR LIGANDS)  
 L6 3787 CHIRAL LIGAND  
 (CHIRAL(W)LIGAND)

=> s L4 and L6  
 L7 18 L4 AND L6

=> s L7 and L2  
 L8 0 L7 AND L2

=> s L4 and L6  
 L9 18 L4 AND L6

=> d L9 1-18 bib abs

L9 ANSWER 1 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:1174237 CAPLUS  
 DN 145:471699

TI Bidentate planar-chiral modular ferrocenyl phosphines, thiols and amines as ligands for transition metal catalyzed asymmetric reactions and process for preparation thereof

IN Pugin, Benoit; Feng, Xiangdong  
 PA Solvias A.-G., Switz.  
 SO PCT Int. Appl., 59pp.  
 CODEN: PIXXD2

DT Patent  
 LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006117369	A1	20061109	WO 2006-EP61973	20060502
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

PRAI CH 2005-776 A 20050503

OS MARPAT 145:471699

AB Ferrocenes  $[(\eta^5-1-R-2-Y-3-X1-4-X2-C5H)Fe(\eta^5-C5H5-nR1n)]$  [1, n = 0-5, R1 = C1-4 alkyl, C6-10 aryl, C7-12 (alk)aralkyl, preferably n = 0; R = H, halo, silyl, optionally alkylthio-, alkoxy-, aryloxy-, silyl-substituted C1-20 organyl, preferably R = C1-4 alkyl(thio) C1-4 alkoxy, PhO, Me3Si; Y = C-bound chiral directing group containing vinyl, Me, Et, alkoxyethyl, siloxymethyl aminomethyl groups, preferably Y = 1-methoxyethyl, 1-dimethylaminoethyl, (dimethylamino)phenylmethyl, 2-oxazolinyl, 1,3-dioxan-2-yl; X1, X2 = optionally chiral phosphino, P-heterocyclyl, SH, organylthio, preferably X1 ≠ X2], useful as ligands for transition metal-catalyzed asym. reactions, preferably for asym. hydrogenation, were prepared by a process comprising lithiation of trisubstituted ferrocenes  $[(\eta^5-1-R-2-Y-3-Z-C5H2)Fe(\eta^5-C5H5-nR1n)]$

(2, Z = halo, same R, R1, Y) by lithium or magnesium secondary amides to  $[(\eta_5\text{-}1\text{-}R\text{-}2\text{-}Y\text{-}3\text{-}Z\text{-}4\text{-}MC_5H)\text{Fe}(\eta_5\text{-}C_5H_5\text{-}nR_1n)}]$  (3, M = Li, halomagnesium) followed by introduction of X2 by reaction with X2Z1 (Z1 = halo) to give  $[(\eta_5\text{-}1\text{-}R\text{-}2\text{-}Y\text{-}3\text{-}Z\text{-}4\text{-}X_2C_5H)\text{Fe}(\eta_5\text{-}C_5H_5\text{-}nR_1n)}]$  (4, same R, Y, X, Z) with subsequent metalation by alkylolithium or Grignard reagents and analogous introduction of X1. In an example, (2S)-1-(dicyclohexylphosphino)-2-diphenylphosphino-3-[(1R)-1-(dimethylaminoethyl)]ferrocene (B1) was prepared by reaction of (1R)-1-bromo-2-[(1R)-1-(dimethylaminoethyl)]ferrocene with lithium 2,2,6,6-tetramethylpiperidine and Cy2PCl, followed by BuLi lithiation of the resulting compound 2 [R = H, Y = (R)-CHMe(NMe2), Z = Br, X2 = PCy2] and reaction with Ph2PCl. In another example, the prepared compound B1 was used as ligand in rhodium-catalyzed asym. hydrogenation of di-Me itaconate, affording di-Me (R)-methylsuccinate with 100% conversion and 95% ee.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2006:725669 CAPLUS  
DN 145:335747  
TI Chiral ligand-controlled asymmetric conjugate amination of enoates with lithium mesitylmethyl(trimethylsilyl)amide  
AU Sakai, Takeo; Doi, Hirohisa; Tomioka, Kiyoshi  
CS Graduate School of Pharmaceutical Sciences, Kyoto University, Kyoto, 606-8501, Japan  
SO Tetrahedron (2006), 62(35), 8351-8359  
CODEN: TETRAB; ISSN: 0040-4020  
PB Elsevier B.V.  
DT Journal  
LA English  
OS CASREACT 145:335747  
AB Lithium mesitylmethyl(trimethylsilyl)amide behaved as a nice amination agent in a chiral ligand-controlled conjugate addition reaction of tert-Bu cinnamate to give the conjugate amination product with 99% ee in 90% yield. Other acyclic and cyclic enoates were also aminated in reasonably high enantioselectivity, while the deprotonation of abstractable proton of enoates caused yield loss of the conjugate amination products, due to the bulkiness and enriched basicity of the lithium amide. Although such steric bulkiness made hard the hydrogenolytic cleavage of a mesitylmethyl-N bond of the adducts, a new protocol comprising N-chlorination-regioselective dehydrochlorination-transoximation was developed for N-dearylmethylation, giving 3-aminoalkanoates in reasonably good yields.

RE.CNT 107 THERE ARE 107 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2006:458921 CAPLUS  
DN 145:145349  
TI Asymmetric Synthesis of Intermediates for Otamixaban and Premafloxacin by the Chiral Ligand-Controlled Asymmetric Conjugate Addition of a Lithium Amide  
AU Sakai, Takeo; Kawamoto, Yoshito; Tomioka, Kiyoshi  
CS Graduate School of Pharmaceutical Sciences, Kyoto University, Yoshida, Sakyo-ku, Kyoto, 606-8501, Japan  
SO Journal of Organic Chemistry (2006), 71(12), 4706-4709  
CODEN: JOCEAH; ISSN: 0022-3263  
PB American Chemical Society  
DT Journal  
LA English  
OS CASREACT 145:145349  
AB A chiral ligand-controlled conjugate addition reaction of Li benzyl(trimethylsilyl)amide with tert-Bu enoates gave Li enolates that were then treated with electrophiles, giving anti-alkylation products with ee  $\leq$  98%. The benzyl group on the amino nitrogen was removed by

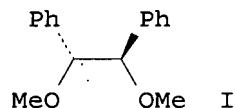
the oxidation of secondary amine to imine and transoximation to give 3-aminoalkanoates in good yields. The products are the possible key intermediates of otamixaban and premafloxacin.

RE.CNT 90 THERE ARE 90 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2006:208484 CAPLUS  
DN 144:432611  
TI 3-Aminopyrrolidine lithium amides as chiral ligands for alkylolithium derivatives: synthesis, NMR analysis, and computational study of their mixed aggregates  
AU Harrison-Marchand, Anne; Valnot, Jean-Yves; Corruble, Aline; Duguet, Nicolas; Oulyadi, Hassan; Desjardins, Stephanie; Fressigne, Catherine; Maddaluno, Jacques  
CS Laboratoire des Fonctions Azotees et Oxygenees Complexes, Universite de Rouen, Mont Saint-Aignan, 76821, Fr.  
SO Pure and Applied Chemistry (2006), 78(2), 321-331  
CODEN: PACHAS; ISSN: 0033-4545  
PB International Union of Pure and Applied Chemistry  
DT Journal; General Review  
LA English  
AB A review. The role of 3-aminopyrrolidine lithium amides (3-APLi's) as chiral ligands for alkylolithiums (AlkLi's) is reviewed. Synthetic developments as well as NMR characterizations and computational interpretations have been simultaneously and complementarily conducted to improve the ligand design for a model reaction that is the condensation of AlkLi's on o-tolualdehyde, for which enantiomeric excesses up to 80% were obtained. This study describes the whole chain going from the synthesis of the chiral 3-aminopyrrolidines (3-APs) (18 different 3-APs synthesized) to the characterization of the noncovalent mixed aggregates resulting from the interaction between the organolithium partners (3-APLi:AlkLi). Finally, the docking of the aldehyde on one lithium of the aggregate was analyzed by theor. means on simplified models, in an attempt to understand the structure of the fully loaded pretransition complexes.

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

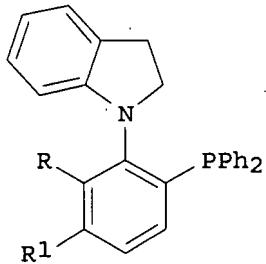
L9 ANSWER 5 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2004:145522 CAPLUS  
DN 141:139856  
TI Asymmetric reactions based on activation and structure control of molecule. Asymmetric reaction of lithiated nucleophiles  
AU Tomioka, Kiyoshi  
CS Graduate School of Pharmaceutical Sciences, Kyoto University, Yoshida, Sakyo-ku, Kyoto, 606-8501, Japan  
SO Yakugaku Zasshi (2004), 124(2), 43-54  
CODEN: YKKZAJ; ISSN: 0031-6903  
PB Pharmaceutical Society of Japan  
DT Journal; General Review  
LA Japanese  
GI



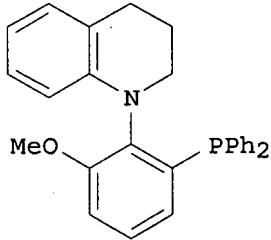
AB A review. The methodol. that we developed relies on an external chiral coordinating reagent that forms a deaggregated chelate complex with organolithium reagents. Under the pos. control of a chiral di-Me ether of

stilbenediol (I) 4, an asym. conjugate addition reaction of organolithium reagents with unsatd. imines and esters proceeded successfully to yield the corresponding addition products with reasonably high stereoselectivity. The sense of stereochem. is predictable based on a coordination model. The methodol. has been extended to a catalytic asym. 1,2-addition reaction of organolithium reagents with imines. An enantiotopic group differentiating the opening of cyclohexene oxide with organolithium was also mediated by a chiral ligand. The asym. Horner-Wadsworth-Emmons reaction of phosphonates and Peterson reaction of  $\alpha$ -silylester with 4-substituted cyclohexanone were another successful extension of the methodol. A three-component reagent of lithium ester enolate, lithium amide, and chiral diether reacts with imines to afford  $\beta$ -lactam with reasonably high enantioselectivity. Tridentate aminoether ligands were also shown to affect the catalytic asym. addition of lithium ester enolates to imines, giving  $\beta$ -lactams with high enantioselectivity. Asym. conjugate addition of lithium amide to enolates was mediated by a chiral diether ligand to give the  $\beta$ -aminoester with high yield and enantioselectivity. The methodol. has been successfully applied to an asym. synthesis of biol. potent compds. Dihydrexidine, a promising anti-Parkinsonism candidate, and salsolidine, a representative isoquinoline alkaloid, have been synthesized using asym. addition reactions of organolithium reagents as the key steps.

L9 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2003:689599 CAPLUS  
 DN 139:381543  
 TI A C(aryl)-N(amine) bond atropisomeric aminophosphine: preparation and use as a ligand in a catalytic asymmetric allylic alkylation  
 AU Mino, Takashi; Tanaka, Youichi; Yabusaki, Toshihiro; Okumura, Daisuke; Sakamoto, Masami; Fujita, Tsutomu  
 CS Faculty of Engineering, Department of Materials Technology, Chiba University, Inage-ku, Chiba, 263-8522, Japan  
 SO Tetrahedron: Asymmetry (2003), 14(17), 2503-2506  
 CODEN: TASYE3; ISSN: 0957-4166  
 PB Elsevier Science B.V.  
 DT Journal  
 LA English  
 OS CASREACT 139:381543  
 GI



I



II

AB (2,3-Dihydroindolyl)phenylphosphines such as I (R = MeO, Me; R1 = H; RR1 = CH:CHCH:CH) and (1,2,3,4-tetrahydroquinolyl)phenylphosphine II are prepared as potential atropisomeric phosphines for use as chiral ligands. I (R = Me; R1 = H) is resolved into its enantiomers by chiral HPLC on 100 mg scale. I (R = Me; R1 = H) racemizes by rotation about the hindered C-N bond with a half-life of 467 d at 25° in toluene, while I (RR1 = CH:CHCH:CH) and I (R = MeO; R1 = H) racemize with half-lives of 102 d and 0.59 d, resp., under similar conditions. (+)- And (-)-I (R = Me; R1 = H) are used as nonracemic phosphine ligands for the palladium-catalyzed allylic alkylation of di-Me malonate with

1,3-diphenyl-2-propenyl acetate to yield the allylic malonates (E,R)- and (E,S)-PhCH:CHCHPhCH(CO<sub>2</sub>Me)<sub>2</sub> in 38-88% yields and in 74-91% ee. Crystal structures of I (R = Me, MeO; R<sub>1</sub> = H) and II are obtained by X-ray crystallog. (no data).

RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2003:635317 CAPLUS  
TI Improved synthesis of tert-butanethiosulfinate suitable for large-scale production  
AU Weix, Daniel J.; Ellman, Jonathan A.  
CS Department of Chemistry, University of California at Berkeley, Berkeley, CA, 94720-1460, USA  
SO Abstracts of Papers, 226th ACS National Meeting, New York, NY, United States, September 7-11, 2003 (2003), ORGN-229 Publisher: American Chemical Society, Washington, D. C.  
CODEN: 69EKY9  
DT Conference; Meeting Abstract  
LA English  
AB Chiral amines are key components of many pharmaceutical agents, materials, and catalysts. Since its introduction in 1997, tert-butanethiosulfinate has proven to be a versatile chiral ammonia equivalent for the asym. synthesis of amines. In response to the high demand for tert-butanethiosulfinate, an improved synthesis of tert-butanethiosulfinate that overcomes the scalability problems of the previous syntheses has been developed. The key step is the catalytic asym. oxidation of the inexpensive di-tert-Bu disulfide starting material to tert-Bu tert-butanethiosulfinate. The new homogeneous reaction conditions utilize an inexpensive chiral ligand prepared in a single step from com. available cis-1-amino-indan-2-ol. The reaction is performed at a 2.3 M concentration in the practical solvent acetone and can readily be run on a kilogram scale. The thiosulfinate ester can then be easily converted to tert-butanethiosulfinate by reaction with lithium amide.

L9 ANSWER 8 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2003:553171 CAPLUS  
DN 139:260704  
TI Overview of organolithium-ligand combinations and lithium amides for enantioselective processes  
AU Hodgson, David M.; Stent, Matthew A. H.  
CS Dyson Perrins Laboratory, Department of Chemistry, University of Oxford, Oxford, OX1 3QY, UK  
SO Topics in Organometallic Chemistry (2003), 5 (Organolithiums in Enantioselective Synthesis), 1-20  
CODEN: TORCFV; ISSN: 1436-6002  
PB Springer-Verlag  
DT Journal; General Review  
LA English  
AB A review on the use of external chiral ligands in enantioinduction in organolithium processes, mainly in the areas of asym. addns. and enantioselective deprotonations.

RE.CNT 95 THERE ARE 95 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 9 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2003:207629 CAPLUS  
DN 138:370638  
TI Improved Synthesis of tert-Butanesulfinate Suitable for Large-Scale Production  
AU Weix, Daniel J.; Ellman, Jonathan A.  
CS Center for New Directions in Organic Synthesis, Department of Chemistry, University of California, Berkeley, CA, 94720, USA  
SO Organic Letters (2003), 5(8), 1317-1320  
CODEN: ORLEF7; ISSN: 1523-7060

PB American Chemical Society

DT Journal

LA English

OS CASREACT 138:370638

AB An improved synthesis of tert-butanesulfinamide that overcomes the scalability problems of the previous syntheses is described. The key step is the catalytic asym. oxidation of the inexpensive di-tert-Bu disulfide starting material. The new homogeneous reaction conditions utilize an inexpensive chiral ligand prepared in a single step from com. available cis-1-amino-indan-2-ol. The reaction is performed at a 4 M concentration in the practical solvent acetone and can readily be run on a kilogram scale.

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 10 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:113730 CAPLUS

DN 138:303914

TI Chiral ligand-controlled asymmetric conjugate addition of lithium amides to enoates

AU Doi, Hirohisa; Sakai, Takeo; Iguchi, Mayu; Yamada, Kenichi; Tomioka, Kiyoshi

CS Graduate School of Pharmaceutical Sciences, Kyoto University, Kyoto, 606-8501, Japan

SO Journal of the American Chemical Society (2003), 125(10), 2886-2887  
CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

OS CASREACT 138:303914

AB  $\beta$ -Amino esters are prepared enantioselectively in 61-99% yields and 73-97% ee by addition of lithium amides (generated from amines and butyllithium) to trans- $\alpha$ , $\beta$ -unsatd. esters in the presence of (R,R)-1,2-dimethoxy-1,2-diphenylethane at -78° in toluene. The amount of amine added is important to assure high enantioselectivities; use of 1.5 equivalent of amine rather than 3.0 equivalent decreases the enantioselectivity of addition to tert-Bu trans-cinnamate from 93% ee to 82% ee. Chlorotrimethylsilane is an effective additive for enantioselective addition of lithium amides to unsatd. esters. In one case, use of 30 mol% of (R,R)-1,2-dimethoxy-1,2-diphenylethane as a nonracemic chiral ligand for the addition of lithium (trimethylsilyl)benzylamide to tert-Bu trans-cinnamate provided the corresponding  $\beta$ -amino ester in 75% yield and 70% ee.

RE.CNT 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 11 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1999:352076 CAPLUS

DN 131:130237

TI A novel chiral pentamine ligand for enantioselective  $\alpha$ -alkylation of acyclic lithium amide enolates. Optimization of chiral ligands for asymmetric reactions using solid-phase organic synthesis

AU Matsuo, Jun-ichi; Odashima, Kazunori; Kobayashi, Shu

CS Graduate School of Pharmaceutical Sciences, The University of Tokyo, Hongo Bunkyo-ku Tokyo, 113-0033, Japan

SO Organic Letters (1999), 1(2), 345-347  
CODEN: ORLEF7; ISSN: 1523-7060

PB American Chemical Society

DT Journal

LA English

AB Using combinatorial chemical and screening of products for optimization of activity, a novel pentamine tetrapeptide ligand has been developed for enantioselective  $\alpha$ -alkylation of simple acyclic lithium amide enolates. It has been demonstrated that solid-phase organic

synthesis provides a powerful and rapid method for finding efficient chiral ligands.

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 12 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1998:134079 CAPLUS  
DN 128:217101  
TI Enantioselective [2,3]sigmatropic rearrangement of  $\alpha$ -propargyloxyacetic acids mediated by BuLi-(-)-sparteine complex  
AU Manabe, Shino  
CS Faculty Pharmaceutical Sciences, Univ. Tokyo, Hongo, Bunkyo-ku, Tokyo, 113, Japan  
SO Chemical & Pharmaceutical Bulletin (1998), 46(2), 335-336  
CODEN: CPBTAL; ISSN: 0009-2363  
PB Pharmaceutical Society of Japan  
DT Journal  
LA English  
OS CASREACT 128:217101  
AB The [2,3]sigmatropic rearrangement of RC.tplbond.CCH<sub>2</sub>OCH<sub>2</sub>CO<sub>2</sub>H [R = heptyl, CH<sub>2</sub>CHMe<sub>2</sub>, CHMe<sub>2</sub>] to give (S)-CH<sub>2</sub>:C:CRCH(OH)CO<sub>2</sub>Me in 40-48% ee was achieved by the use of BuLi-(-)-sparteine complex in toluene. BuLi-chiral ligand complexes are stronger bases than lithium amides, so they are expected to be good mediators of this reaction.

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 13 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1997:811868 CAPLUS  
DN 128:114982  
TI Ab initio theoretical study of 3-aminopyrrolidines lithium amides as chiral ligands for butyllithium  
AU Fressigne, Catherine; Corruble, Aline; Valnot, Jean-Yves; Maddaluno, Jacques; Giessner-Prettre, Claude  
CS Laboratoire des Fonctions Azotees et Oxygenees Complexes de l'IRCOF, Universite de Rouen, 76821 Mont St Aignan Cedex, UPRES-A 6014, Fr.  
SO Journal of Organometallic Chemistry (1997), 549(1-2), 81-88  
CODEN: JORCAI; ISSN: 0022-328X  
PB Elsevier Science S.A.  
DT Journal  
LA English  
AB DFT computations on 3-N-methylamino-N-methylpyrrolidine Li amide and its complex with methyllithium are reported. The results obtained fully support the norbornyl-like folding adopted by the pyrrolidine ring that was inferred from exptl. NMR data. The <sup>6</sup>Li and <sup>13</sup>C theor. nuclear magnetic shielding consts. are in reasonable agreement with the corresponding measured chemical shifts for parent compds. The comparison between exptl. and theor. results confirms that, for the 3-aminopyrrolidines exptl. studied, there is, in solution, a delicate balance between steric repulsions and aggregation forces. However, the model systems considered in this preliminary study are able to account for the energy scale of most of the different possible intermol. interactions but not for the driving forces at work in the aldehyde-Li amide condensation reaction.

RE.CNT 55 THERE ARE 55 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 14 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1994:482081 CAPLUS  
DN 121:82081  
TI Asymmetric synthesis mediated by chiral ligands  
AU Koga, Kenji  
CS Faculty Pharmaceutical Sciences, University Tokyo, Tokyo, 113, Japan  
SO Pure and Applied Chemistry (1994), 66(7), 1487-92

CODEN: PACHAS; ISSN: 0033-4545  
DT Journal; General Review  
LA English  
AB A review with 11 refs. Chiral chelated lithium amides were designed and synthesized and studies were carried out on the use of these lithium amides or the corresponding amines for enantioselective reactions such as deprotonation of prochiral cyclic ketones, kinetic resolution of racemic 2-substituted cyclohexanones by deprotonation, regioselective deprotonation of optically active 3-keto steroids, alkylation of achiral ketones, and deracemization of chiral ketones by protonation.

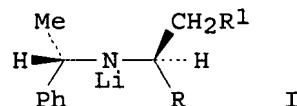
L9 ANSWER 15 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1993:408376 CAPLUS  
DN 119:8376  
TI Enantioselective conjugate addition to cyclic enones with scalemic lithium organo(amido)cuprates. Part IV. Relationship between ligand structure and enantioselectivity  
AU Rossiter, Bryant E.; Eguchi, Masakatsu; Miao, Guobin; Swingle, Nicole M.; Hernandez, Amelia E.; Vickers, Denise; Fluckiger, Ezdan; Patterson, R. Greg; Reddy, K. Vasavi  
CS Dep. Chem., Brigham Young Univ., Provo, UT, 84602, USA  
SO Tetrahedron (1993), 49(5), 965-86  
CODEN: TETRAB; ISSN: 0040-4020  
DT Journal  
LA English  
OS CASREACT 119:8376  
AB Scalemic lithium amides derived from primary and secondary amines react with organocopper compds. in ether or di-Me sulfide to form lithium organo(amido)cuprates capable of enantioselective conjugate addition to 2-cycloalkenones. The most successful heterocuprate, in which the chiral ligand is (S)-N-methyl-1-phenyl-2-(1-piperidinyl)ethanamine, (S)-MAPP; (I) reacts with cyclic enones to form products with up to 97% enantiomeric excess. Nonlinear asym. induction was observed with the cuprate formed from ligand I. Thus, a solution of CuI in Me2S was added to a solution of I and BuLi in Me2S to give a suspension of cuprate. Treating 2-cyclohexenone with the cuprate solution at -78° gave 60% (S)-3-butylcyclohexanone in 83% enantiomeric excess.

L9 ANSWER 16 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1993:6692 CAPLUS  
DN 118:6692  
TI New methods and reagents in organic synthesis. 89. Studies on reaction conditions and new entry to chiral ligands in the chiral lithium amide-mediated enantioselective aldol reaction  
AU Ando, Akira; Tatematsu, Toshiaki; Shiori, Takayuki  
CS Fac. Pharm. Sci., Nagoya City Univ., Nagoya, 467, Japan  
SO Chemical & Pharmaceutical Bulletin (1991), 39(8), 1967-71  
CODEN: CPBTAL; ISSN: 0009-2363  
DT Journal  
LA English  
OS CASREACT 118:6692  
AB Reaction conditions for the enantioselective aldol reaction of EtCOCMe3 and BzH using the chiral lithium amide (S)-Me2CHCH(CH2OMe)NLiCHMe2 (I) as a chiral auxiliary were thoroughly investigated. All three procedures, i.e., the combined use of LDA and the chiral lithium amide I, the use of an excess of the chiral lithium amide I, and the regeneration of the chiral lithium amide I, afforded the aldol (S,S)-PhCH(OH)CHMeCOCMe3 [(S,S)-II] in about 90% yield and 70% enantiomeric excess (ee). Investigation of the effects of solvent by utilizing 1-naphthaldehyde revealed that in THF, (S,S)-1-C10H7CH(OH)CHMeCOCMe3 [(S,S)-III] of 77% ee was obtained as the major product, while in ether (R,R)-III became the major isomer (38% ee).

Furthermore, addition of HMPA caused a dramatic change of stereoselectivity, and (S,S)-III of 70% ee was obtained in ether with 20 equiv of HMPA. The aldol (R,R)-II of 74% ee was obtained when the new chiral lithium amide (1S,2R)-PhCH(OMe)CHPhNLiCHMe<sub>2</sub> was used.

L9 ANSWER 17 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1989:94621 CAPLUS  
 DN 110:94621  
 TI Enantioselective aldol reactions using chiral lithium amides as a chiral auxiliary  
 AU Ando, Akira; Shioiri, Takayuki  
 CS Fac. Pharm. Sci., Nagoya City Univ., Nagoya, 467, Japan  
 SO Journal of the Chemical Society, Chemical Communications (1987), (21), 1620-1  
 CODEN: JCCCAT; ISSN: 0022-4936  
 DT Journal  
 LA English  
 OS CASREACT 110:94621  
 AB The enantioselective aldol reaction of EtCOCMe<sub>3</sub> with BzH in the presence of chiral ligands was thoroughly investigated. With the lithium amide derived from 2-(isopropylamino)-1-methoxy-3-methylbutane as chiral ligand, a chemical yield of 93% and 68% enantiomeric excess were realized.

L9 ANSWER 18 OF 18 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1985:131605 CAPLUS  
 DN 102:131605  
 TI Enantioselective addition of n-butyllithium to benzaldehyde in the present of chiral lithium amides  
 AU Eleveld, M. B.; Hogeveen, H.  
 CS Dep. Org. Chem., Univ. Groningen, Groningen, 9747 AG, Neth.  
 SO Tetrahedron Letters (1984), 25(45), 5187-90  
 CODEN: TELEAY; ISSN: 0040-4039  
 DT Journal  
 LA English  
 OS CASREACT 102:131605  
 GI



AB The reaction of BuLi with PhCHO in the presence of chiral lithium amides I (R = Ph, 2-pyridyl, 2-MeOC<sub>6</sub>H<sub>4</sub>, R<sub>1</sub> = H; R = Ph, R<sub>1</sub> = OMe) gives HOCHPhBu with optical yields  $\leq 90\%$ .

=> s lithium amide  
 325716 LITHIUM  
 370 LITHIUMS  
 325844 LITHIUM  
 (LITHIUM OR LITHIUMS)  
 130578 AMIDE  
 82097 AMIDES  
 178013 AMIDE  
 (AMIDE OR AMIDES)  
 L10 1488 LITHIUM AMIDE  
 (LITHIUM(W)AMIDE)

=> s alpha beta unsaturated carbonyl compound  
 1693145 ALPHA

2493 ALPHAS  
1693252 ALPHA  
(ALPHA OR ALPHAS)  
1460741 BETA  
1325 BETAS  
1460818 BETA  
(BETA OR BETAS)  
56956 UNSATURATED  
1 UNSATURATEDS  
56957 UNSATURATED  
(UNSATURATED OR UNSATURATEDS)  
228182 UNSATD  
13 UNSATDS  
228185 UNSATD  
(UNSATD OR UNSATDS)  
243085 UNSATURATED  
(UNSATURATED OR UNSATD)  
175092 CARBONYL  
27670 CARBONYLS  
183368 CARBONYL  
(CARBONYL OR CARBONYLS)  
122915 COMPOUND  
872009 COMPOUNDS  
977161 COMPOUND  
(COMPOUND OR COMPOUNDS)  
1165677 COMPD  
1740256 COMPDS  
2490661 COMPD  
(COMPD OR COMPDS)  
2929224 COMPOUND  
(COMPOUND OR COMPD)

L11 1924 ALPHA BETA UNSATURATED CARBONYL COMPOUND  
(ALPHA (W) BETA (W) UNSATURATED (W) CARBONYL (W) COMPOUND)

=> s L10 and L11  
L12 3 L10 AND L11

=> s chiral ligand  
116143 CHIRAL  
16 CHIRALS  
116147 CHIRAL  
(CHIRAL OR CHIRALS)  
322807 LIGAND  
219575 LIGANDS  
439244 LIGAND  
(LIGAND OR LIGANDS)

L13 3787 CHIRAL LIGAND  
(CHIRAL (W) LIGAND)

=> s L10 and L11  
L14 3 L10 AND L11

=> s L13 and L14  
L15 0 L13 AND L14

=> s beta aminoacid  
1460741 BETA  
1325 BETAS  
1460818 BETA  
(BETA OR BETAS)  
209 AMINOACID  
183 AMINOACIDS  
376 AMINOACID  
(AMINOACID OR AMINOACIDS)

L16 6 BETA AMINOACID

(BETA(W)AMINOACID)

=> s L13 and L16  
L17            0 L13 AND L16

=> s L12 1-3 bib abs  
MISSING OPERATOR L12 1-3

The search profile that was entered contains terms or  
nested terms that are not separated by a logical operator.

=> d L12 1-3 bib abs

L12 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2003:61435 CAPLUS  
DN 138:320779  
TI Lewis base catalyzed Michael reaction between ketene silyl acetals and .  
alpha., $\beta$ -unsaturated carbonyl  
compounds  
AU Mukaiyama, Teruaki; Nakagawa, Takashi; Fujisawa, Hidehiko  
CS Center for Basic Research, TCI, The Kitasato Institute, Tokyo, 114-0003,  
Japan  
SO Chemistry Letters (2003), 32(1), 56-57  
CODEN: CMLTAG; ISSN: 0366-7022  
PB Chemical Society of Japan  
DT Journal  
LA English  
OS CASREACT 138:320779  
AB Catalytic Michael reaction between trimethylsilyl enolates and .  
alpha., $\beta$ -unsatd. carbonyl  
compds. by using a Lewis base such as lithium benzamide or lithium  
succinimide in a DMF solvent proceeded smoothly to afford the  
corresponding Michael adducts.

RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1997:104679 CAPLUS  
DN 126:199800  
TI Asymmetric synthesis of  $\beta$ -amino acids via the Michael addition of  
chiral metal amides  
AU Davies, Stephen G.; Ichihara, Osamu  
CS Dyson Perrins Lab., Univ. Oxford, Oxford, UK  
SO Yuki Gosei Kagaku Kyokaishi (1997), 55(1), 42-50  
CODEN: YGKKA; ISSN: 0037-9980  
PB Yuki Gosei Kagaku Kyokai  
DT Journal; General Review  
LA Japanese  
AB A review with 32 refs. A Li amide conjugate addition approach to the  
synthesis of  $\beta$ -amino acid derivs. is described. Li amides derived  
from  $\alpha$ -methylbenzylamine undergo highly diastereoselective  
1,4-conjugate addition to a variety of  $\alpha$ , $\beta$  -  
unsatd. carbonyl compds. The benzyl  
substituents on the amino group can be readily removed by hydrogenolysis  
to afford a wide range of  $\beta$ -amino acid derivs. The enolate  
intermediate can be trapped by electrophiles such as alkyl halides and  
(camphorsulfonyl)oxaziridine to give  $\alpha$ -alkyl and  
 $\alpha$ -hydroxy- $\beta$ -amino acids in a highly stereocontrolled fashion.  
The synthetic utility of the methodol. is demonstrated by the syntheses of  
nos. of natural products and other important synthetic intermediates such  
as taxol C-13 side chain, cispentacin, and (+)-negamycin. The origin of  
the stereoselectivity is briefly discussed.

L12 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1973:515184 CAPLUS  
DN 79:115184

TI Organoselenium chemistry.  $\alpha$ -Phenylseleno carbonyl compounds as precursors for  $\alpha,\beta$ -unsaturated ketones and esters  
AU Reich, Hans J.; Reich, Ieva L.; Renga, James M.  
CS Dep. Chem., Univ. Wisconsin, Madison, WI, USA  
SO Journal of the American Chemical Society (1973), 95(17), 5813-15  
CODEN: JACSAT; ISSN: 0002-7863  
DT Journal  
LA English  
OS CASREACT 79:115184  
AB A synthetic method for the conversion of esters and ketones to their  $\alpha,\beta$ -unsatd. derivs., such as cyclohexenones, is described. The procedure involves the reaction of the Li enolate of the carbonyl compound with PhSeBr to give an  $\alpha$ -phenylseleno ester or ketone, followed by oxidation to the selenoxide. The selenoxide undergoes facile syn-elimination to form the  $\alpha,\beta$ -unsatd. carbonyl compound. The sequence, which is carried out at or below room temperature, gives excellent yields for acyclic and for some cyclic esters and ketones.

=> d L16 1-6 bib abs

L16 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2006:862736 CAPLUS  
TI New building blocks for the synthesis of conformationally restricted  $\beta$ -peptides  
AU Moran Ramallal, Antonio; Gonzalez, Javier; del Pozo Losada, Carlos; Macias Rabanal, Alberto  
CS Department of Organic and Inorganic Chemistry, Universidad de Oviedo, 33006 - Oviedo, Spain  
SO Abstracts of Papers, 232nd ACS National Meeting, San Francisco, CA, United States, Sept. 10-14, 2006 (2006), ORGN-595 Publisher: American Chemical Society, Washington, D. C.  
CODEN: 69IHRD  
DT Conference; Meeting Abstract; (computer optical disk)  
LA English  
AB The development of new methodol. directed to the preparation of new types of conformationally-restricted  $\beta$ -aminoacids is a very active field of research in organic synthesis. In our group we have been working on the preparation of  $\beta$ -aminoacids  $\alpha,\alpha$ -disubstituted, bearing a heterocyclic ring with the final objective of preparing new types of  $\beta$ -peptides. The synthetic route involves the preparation of a spiranic  $\beta$ -lactam, through the ketene-imine cycloaddn. [2+2]-cycloaddn. reaction (Staudinger reaction), followed by the ring-opening. In order to achieve very-mild conditions for the ring opening of the  $\beta$ -lactam, we introduced the electron-withdrawing group Boc on the  $\beta$ -lactam nitrogen, and use KCN as catalyst. In this paper we describe the preparation of several types of  $\beta$ -aminoacids using this methodol. The Staudinger reaction shows an excellent degree of stereocontrol, the reaction proceeds usually with good yields, and the compds. are obtained in an orthogonally-protected form.

L16 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2006:861385 CAPLUS  
TI Yttrium(III) complexes: Highly active catalysts for ring opening polymerizations  
AU Williams, Charlotte K.  
CS Department of Chemistry, Imperial College London, London, SW7 2AZ, UK  
SO Abstracts of Papers, 232nd ACS National Meeting, San Francisco, CA, United States, Sept. 10-14, 2006 (2006), INOR-1000 Publisher: American Chemical Society, Washington, D. C.  
CODEN: 69IHRD  
DT Conference; Meeting Abstract; (computer optical disk)  
LA English  
AB The chemical of poly(beta-aminoacids) has been

experiencing a renaissance in recent years due to the ability of these materials to mimic secondary structural features of peptides. They have found application as peptide mimetics in pharmaceuticals, anti-microbial surfaces and medicinal applications where they are particularly valued due to their resistance to peptidases and other hydrolytic enzymes. The single-step synthesis of these polymers, via the metal catalyzed ring opening polymerization of lactams is presented. The synthesis and characterization of well defined yttrium(III) amide complexes are described and these species are highly active and controlled catalysts for the ring opening polymerization of (S)-4-(Benzylloxylcaronyl)-2-azetidone. The polymerization kinetics and mechanism are studied and the catalysts are shown

to

exert good polymerization control. The catalysts are also active for the ring opening polymerization of lactones and can be used to synthesize novel block copoly(ester-amides).

L16 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2006:693765 CAPLUS  
DN 145:315252  
TI A solution to the component instability problem in the preparation of peptides containing C2-substituted cis-cyclobutane  $\beta$ -aminoacids: synthesis of a stable rhodopeptin analog  
AU Roy, Olivier; Faure, Sophie; Aitken, David J.  
CS Laboratoire SEESIB-CNRS, Departement de Chimie, Universite Blaise Pascal, Clermont-Ferrand II, Aubiere, 63177, Fr.  
SO Tetrahedron Letters (2006), 47(33), 5981-5984  
CODEN: TELEAY; ISSN: 0040-4039  
PB Elsevier B.V.  
DT Journal  
LA English  
OS CASREACT 145:315252  
AB Despite the inherent instability of C2-substituted cis-cyclobutane  $\beta$ -aminoacids, incorporation of such residues into peptides is shown to be possible through use of a 1-amino-2-(hydroxymethyl)cyclobutane derivative as a stable  $\beta$ -aminoacid surrogate. This synthetic strategy was validated by the synthesis of a rhodopeptin analog.

RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L16 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2005:124735 CAPLUS  
TI Enzymatic resolution of cyclic N-Boc protected  $\beta$ -aminoacids [Tetrahedron: Asymmetry 15 (2004) 3407]  
AU Pousset, Cyrille; Callens, Roland; Haddad, Mansour; Larcheveque, Marc  
CS Laboratoire de Synthese Organique, ENSCP, CNRS, Paris, 75231 05, Fr.  
SO Tetrahedron: Asymmetry (2005), 16(3), 745  
CODEN: TASYE3; ISSN: 0957-4166  
PB Elsevier B.V.  
DT Journal; Errata  
LA English  
AB Unavailable

L16 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2003:522188 CAPLUS  
TI Solution NMR and x-ray crystal structures of new chiral 1,4-oxazepinium heterocycles from 2,4-pentanedione  
AU Lozada, Concepcion  
CS Instituto de Quimica, UNAM, Coyo, Mex.  
SO Abstracts, 36th Middle Atlantic Regional Meeting of the American Chemical Society, Princeton, NJ, United States, June 8-11 (2003), 319 Publisher: American Chemical Society, Washington, D. C.  
CODEN: 69EBDT  
DT Conference; Meeting Abstract  
LA English

AB The reaction of 2,4-pentanedione 1 with (R)-(-)-2-phenylglycine Me ester 2, (R)-(-)-2-phenylglycinol 3 and the proteinogenic aminoacids (2S,3R)-(-)-2-amino-3-hydroxybutyric acid (L-Threonine) 4, and (R)-(-)-2-amino-3-mercaptopropionic acid (L-cysteine) 5 Me esters was investigated. The corresponding enamines 6, 7, 8 were isolated and characterized spectroscopically while 9, unstable, was transformed in situ into 13. Furthermore, treatment of 7, 8 and 9 with Boron trifluoride etherate, afforded the new [1,4] oxazepines 10, 11, and [1,4] thiazepine 12 as their BF<sub>3</sub>O- salts. The structure of enamines and their corresponding seven member heterocycles was assessed by 1D and 2D NMR spectroscopy and by X-ray crystallog. detns. Variable temperature expts. showed different mol. mobility among these heterocycles. As a part of our studies with  $\beta$ -diketone compds. of natural origin, it became necessary to explore the reactivity of this chemical functionality with some  $\alpha$ -L-amino acid Me esters and other chiral compds. i.e. (R)-(-)-2-phenylglycinol. Such reactions have led at a first step to the corresponding enamines; resulted from the nucleophilic attack of the primary amine function to 2,4-pentanedione at room temperature in CH<sub>2</sub>Cl<sub>2</sub>, with Me esters of  $\beta$ -aminoacids. Resulting products further were transformed into the corresponding seven-membered heterocycles, upon treatment with boron trifluoride etherate at room temperature

The NMR spectra of these heterocycles are distinct and uniquely associated with each of these structures.

L16 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1906:103540 CAPLUS  
DN 0:103540  
TI Synthesis of thymine and other uracils  
AU Fischer, Emil; Roeder, George  
SO Sitzungsberichte der Akademie der Wissenschaften in Berlin (1901), 12, 268-76  
From: J. Chem. Soc., Abstr. 80, I, 294-5 1901  
CODEN: SAWBEB  
DT Journal  
LA Unavailable  
AB Hydouracils may be produced either by the interaction of potassium cyanate and the salts of the esters of  $\beta$ -aminoacids, or by heating carbamide with an unsaturated acid. The preparations of 4-methyldihydrouracil, ethyl  $\beta$ -aminobutyrate, bromo-4-methyldihydrouracil, methyluracil, and 5-methyldihydrouracil are discussed. Their characteristics are also described.

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CA SUBSCRIBER PRICE	-21.06	-21.06

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